Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. *Applicant/Contact name and address*: Shirley M. McCrea
7009 NB Loop
Wolf Point, MT 59201

2. *Type of action*: Surface Water Application for Beneficial Water Use Permit 40S 30155207

3. *Water source name*: Missouri River

4. *Location affected by project*: Section 22, 23, 27, T27N, R50E, McCone County

5. *Narrative summary of the proposed project, purpose, action to be taken, and benefits:*
The Applicant proposes to divert water from the Missouri River for irrigation from April 1 to October 31. The requested flow rate is 1,458 gallons per minute (3.3 cubic feet per second), up to 497 acre-feet per year. The point of diversion is a pump on the south bank of the river in the SENENW Section 26, T27N, R50E, McCone County. Water would be conveyed to 3 center pivots located in Sections 22, 23 and 27, T27N, R50E, McCone County, to irrigate 198.9 acres.

The same pump and point of diversion will also be used to supply water that is appropriated under an existing Water Right No. 40S 15984-00, also owned by the Applicant. Water Right No. 40S 15984-00 irrigates 130 acres in SE Section 22, T27N, R50E with an existing center pivot. It is appropriated for a flow rate of 1,000 GPM and 351 AF during April 1 to October 31.

If approved, the total system will allow the Applicant to grow soybeans, wheat and peas on rotation with sufficient irrigation.

The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311, MCA are met.

6. *Agencies consulted during preparation of the Environmental Assessment: (including agencies with overlapping jurisdiction)*

Montana Department of Natural Resources and Conservation (DNRC)
Montana Department of Environmental Quality website
Montana Natural Heritage Program website

USDA Web Soil Survey
National Wetlands Inventory website

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

This reach of the Missouri River has not been identified by the Department of Fish, Wildlife, & Parks (FWP) as chronically or periodically dewatered. Also, FWP holds an instream flow right on this section of the Missouri River for 5178 CFS, effective year-round. Based on the flow requested and the FWP instream right, the proposed diversion is unlikely to alter the current condition of the river, therefore no significant impacts to water quantity related to this application have been identified.

Determination: No significant impact

Water quality *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

The reach of the Missouri River where the proposed POD is located has been identified by the Department of Environmental Quality (DEQ) as fully supporting agricultural and drinking water uses and not fully supporting aquatic life. It was not assessed for primary contact recreation. The probable cause of impairment on aquatic life is Fort Peck Dam which alters the natural flow pattern of the river and thus impacts riparian habitat. The proposed project is not expected to have any significant effect on water quality.

Determination: No significant impact.

Groundwater *- Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

Determination: This surface water appropriation should have no significant impact on groundwater in the area.

DIVERSION WORKS *- Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

The diversion works will consist of an Ames floating pump assembly with a Cornell 150HP 6HH pump. The pump will not have any impacts to the river channel and riparian zone, nor create any barriers or flow modifications. Water will be conveyed to 4 pivots via underground pipelines and power cables ranging from 2,500 to 7,000 ft long; part of which follows an existing road. After excavation and backfilling, no lasting impacts are anticipated. This project will not affect any dam and well construction.

Determination: No significant impact.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species *- Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

The Montana Natural Heritage Program identifies 19 animal species of concern (see below) within the township and range that the project is located. Of this list, the Piping Plover and Pallid Sturgeon are listed by the US Fish & Wildlife Service as Endangered. The BLM identifies the Least Tern and Pallid Sturgeon as Endangered. The BLM also identifies the Piping Plover as threatened.

Hoary Bat	Eastern Red Bat	Townsend's Big-eared Bat	Piping Plover	Black-billed Cuckoo	Bobolink
Least Tern	Red-headed Woodpecker	Smooth Greensnake	Iowa Darter	Blue Sucker	Northern Redbelly Dace
Shortnose Gar	Sturgeon Chub	Sicklefin Chub	Paddle Fish	Pallid Sturgeon	Sauger
Northern Pearl Dace					

The Least Tern is a species that prefers unvegetated sand-pebble beaches and islands of large reservoirs and rivers in northeastern and southeastern Montana—specifically, the Yellowstone and Missouri River systems. The Applicant's floating pump assembly occupies a small footprint and is accessible by a well-established road. The Applicant has the ability to control the pump and pivots with radio frequency, thus reducing traffic to the river. The project is not anticipated to have a negative effect on the Least Tern.

Pallid Sturgeon are found in the Missouri River and use large, turbid rivers over sand and gravel bottoms, usually in strong current. They use all channel types, but primarily use straight reaches with islands. The Applicant's floating pump assembly occupies a small footprint and is not anticipated to have an effect on Pallid Sturgeon.

Piping Plovers primarily select unvegetated sand or pebble beaches on shorelines or islands in freshwater and saline wetlands. They usually arrive in Montana in early May and leaves the state by late August. If conditions are right, alkali wetlands, lakes, reservoirs, and rivers can all provide the essential features required for nesting. Because the Applicant has historically farmed

close to 800 acres on the river bottom, the proposed pivots are not expected to cause additional impact to any Piping Plover habitat that might be present.

Determination: No significant impact.

Wetlands **-** *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

The US FWS National Wetlands Inventory identifies a sliver of "freshwater emergent wetland" circling through the project site, particularly in the SWSW of Section 23, and NENE of Section 27. It appears that the identified wetland might have been a remnant oxbow and has been farmed through historically. USDA Soil Survey designates this feature as Map Unit 104, Lohler silty clay. Lohler is well-drained, not flooded nor ponded, and does not meet the hydric criteria.

Determination: The identified wetland has been historically tilled as cropland. The proposed appropriation is not expected to cause significant impact.

Ponds **-** *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: Not applicable.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

The majority of the proposed irrigation fields have been historically farmed. Havrelon silty clay loam, Havrelon loam and Lohler silty clay loam make up the majority of soil units mapped for the project area, according to the USDA Web Soil Survey. Parent material consists of loamy to clayey alluviam. These units occur on level ground with 0 to 2 percent slope, are well-drained to moderately well-drained, non-saline and not flooded. While the Havrelon soils do not have a zone of water saturation within a depth of 72 inches, the Lohler has a seasonal zone of water saturation at a depth of 60 inches during all months except July and August. Interestingly, for irrigated capability, these soils are rated as "Class 4 soils that have very severe limitations that reduce the choice of plants or that require very careful management, or both." The main limitation is the risk of erosion during fallow. In absence of soil erodibility, the project site would be considered a prime farmland.

Center pivots are not anticipated to cause degradation of the soil quality, nor development of a saline seep. The Applicant plans to rotate soybean, wheat and peas across the fields, which could improve plant cover and nutrient cycling for the soil.

Determination: No significant impact.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

There are not federally-listed plant species of concern in the project area. Because this area has been farmed historically, the proposed appropriation will not cause additional impact to vegetation. The control of noxious weeds is the responsibility of the property owner.

Determination: No significant impact.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

The Cornell 6HH pump and the pivots operate on electric motors via underground cables. The total irrigation works are not expected to degrade air quality.

Determination: No significant impact.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands.*

Determination: NA--Project not located on State or Federal Lands.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: No other additional impacts on environmental resources were identified.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: There are no known local environmental plans or goals in this area.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

The project is located on rural private land which has been historically used for crop production. It will not affect the quality of recreational and wilderness activities.

Determination: No significant impact.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

The project is located on private cropland and will not affect human health.

Determination: No significant impact.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
*Yes___ No_**X**__ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights*.

Determination: There are no additional government regulatory requirement on private property rights associated with this application.

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) *Cultural uniqueness and diversity?* No significant impact

(b) *Local and state tax base and tax revenues?* No significant impact

(c) *Existing land uses?* No significant impact

(d) *Quantity and distribution of employment?* No significant impact

(e) *Distribution and density of population and housing?* No significant impact

(f) *Demands for government services?* No significant impact

(g) *Industrial and commercial activity?* No significant impact

(h) *Utilities?* No significant impact

(i) *Transportation?* No significant impact

(j) *Safety?* No significant impact

(k) *Other appropriate social and economic circumstances?* No significant impact

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts This application does not present possible secondary impacts on the physical environment and human population.

Cumulative Impacts This application does not present possible cumulative impacts on the physical environment and human population.

3. ***Describe any mitigation/stipulation measures:*** N/A

4. ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*** An alternative analysis of the project identified a No-Action alternative to the requested appropriation. Under the No-Action alternative, the Applicant would not be able to irrigate the fields identified in this application. The No-Action alternative would not allow the applicant to grow a water-demanding crop such as soybeans. Dryland farming of wheat and peas would still be possible.

PART III. Conclusion

1. ***Preferred Alternative:*** Issue a water use permit if the applicant proves the criteria in 85-2-311, MCA are met.

2 Comments and Responses:

3. ***Finding:*** *Based on the significance criteria evaluated in this EA, is an EIS required?* No

If an EIS is not required, explain <u>why</u> the EA is the appropriate level of analysis for this proposed action: No significant impacts have been identified, therefore an EIS is not necessary.

Name of person(s) responsible for preparation of EA:

Name: Lih-An Yang
Title: Water Resources Specialist
Date: October 6, 2022